

Tropical Cyclone Report  
Tropical Storm Dolores  
6-8 July 2003

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Dolores was a short-lived, minimal tropical storm that remained over water.

a. Synoptic History

Radiosonde data from the Windward Islands indicate that a tropical wave entered the eastern Caribbean Sea on 27 June. It is difficult, however, to trace this wave back to Africa. The system moved westward and entered the eastern north Pacific Ocean on 30 June. An area of disturbed weather associated with the wave received its first Dvorak classification on 3 July at 1800 UTC, while it was centered about 625 n mi south of Manzanillo, Mexico. Deep convection associated with the disturbance sputtered for a couple of days, but became more persistent on 5 July, although a low-level circulation center was not well defined. Around 0600 UTC 6 July, the convection became organized enough to designate the system as a tropical depression that was centered about 655 n mi south-southwest of the southern tip of Baja California. The tropical cyclone strengthened slightly, and became Tropical Storm Dolores by 1200 UTC 6 July. At that time, maximum winds were estimated to be 35 kt, which turned out to be the peak intensity of the cyclone. East-northeasterly shearing soon had an adverse affect on Dolores and, later on 6 July, the low-cloud center became exposed to the northeast of the main area of convection.

A mid-level ridge north and northeast of the system caused a west-northwestward to northwestward motion throughout the tropical cyclone's short history. This motion soon took the tropical cyclone over lower (below 25°C) sea surface temperatures. Aside from a few brief flare-ups, deep convection associated with Dolores generally diminished after the system reached tropical storm strength. Dolores weakened back to a tropical depression around 0000 UTC 8 July, and diminished to a remnant low located about 800 n mi west-southwest of the southern tip of Baja California around 0600 UTC that day. The low dissipated by 0000 UTC 9 July.

The "best track" chart of the tropical cyclone's path is given in Fig. 1, with the wind and pressure histories shown in Figs. 2 and 3, respectively. The best track positions and intensities are listed in Table 1.

b. Meteorological Statistics

Observations in Dolores (Figs. 2 and 3) are satellite-based Dvorak technique intensity estimates from the Tropical Analysis and Forecast Branch (TAFB), the Satellite Analysis Branch (SAB) and the U. S. Air Force Weather Agency (AFWA).

No ship reports of winds of tropical storm force associated with Dolores were received.

c. Casualty and Damage Statistics

Dolores is not known to have caused any damage or casualties.

d. Forecast and Warning Critique

Dolores was a tropical cyclone for only a couple of days, so there were not enough cases for meaningful verification statistics. Since it was evident that the system was not in a very favorable environment for strengthening, the official intensity forecasts never called for significant strengthening. Watches or warnings were neither required nor issued for Dolores.

Table 1. Best track for Tropical Storm Dolores, 6-8 July 2003.

Date/Time (UTC)	Latitude (°N)	Longitude (°W)	Pressure (mb)	Wind Speed (kt)	Stage
06 / 0600	13.8	116.0	1007	30	tropical depression
06 / 1200	14.6	117.0	1005	35	tropical storm
06 / 1800	15.5	117.9	1006	35	"
07 / 0000	16.0	118.6	1006	30	tropical depression
07 / 0600	16.5	119.4	1006	30	"
07 / 1200	17.0	120.2	1007	25	"
07 / 1800	17.3	121.1	1007	25	"
08 / 0000	17.6	122.0	1007	25	"
08 / 0600	17.9	122.8	1008	20	remnant low
08 / 1200	18.2	124.0	1009	20	"
08 / 1800	18.6	125.5	1010	20	"
09 / 0000					dissipated
06 / 1200	14.6	117.0	1005	35	minimum pressure

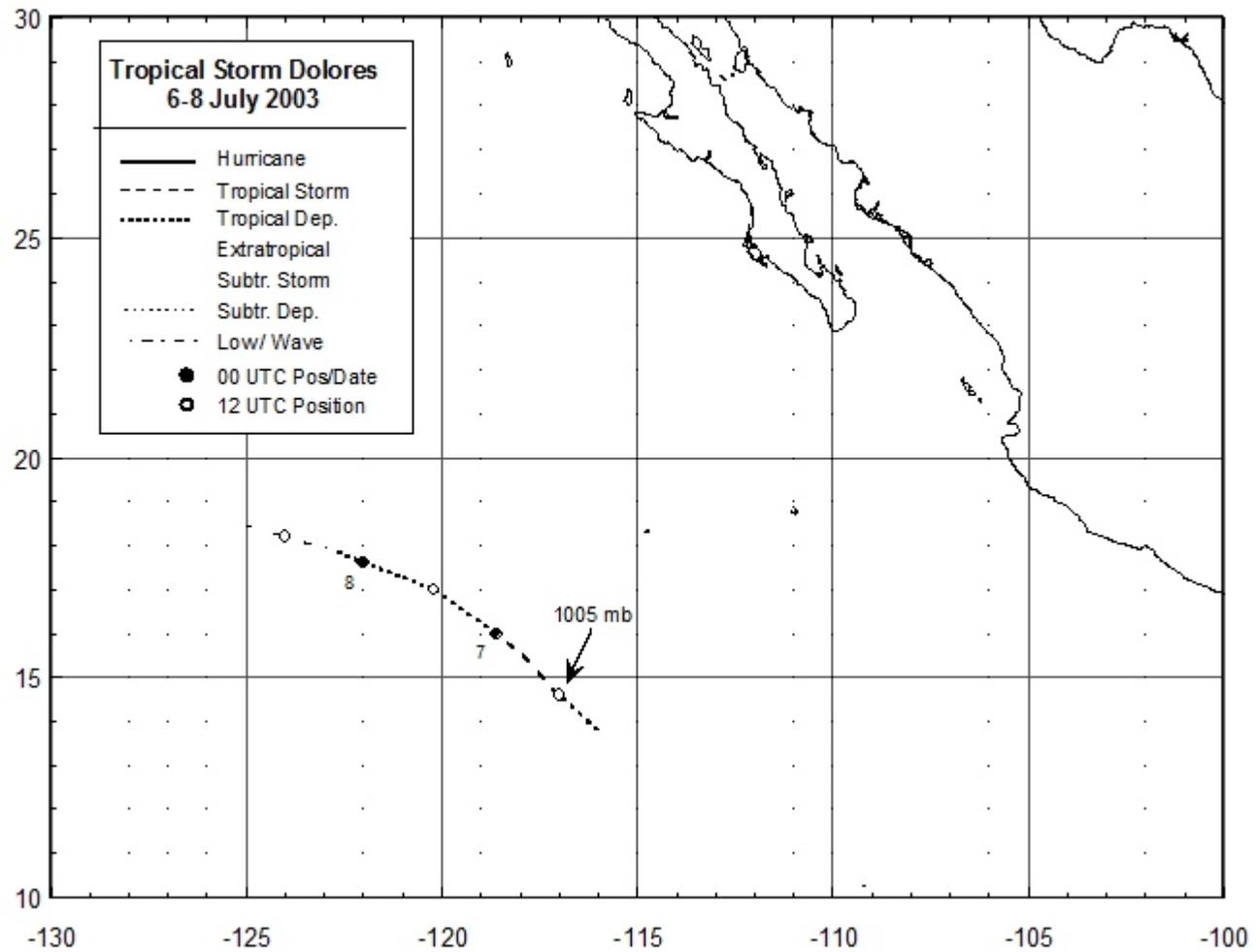


Figure 1. Best track positions for Tropical Storm Dolores, 6-8 July 2003.

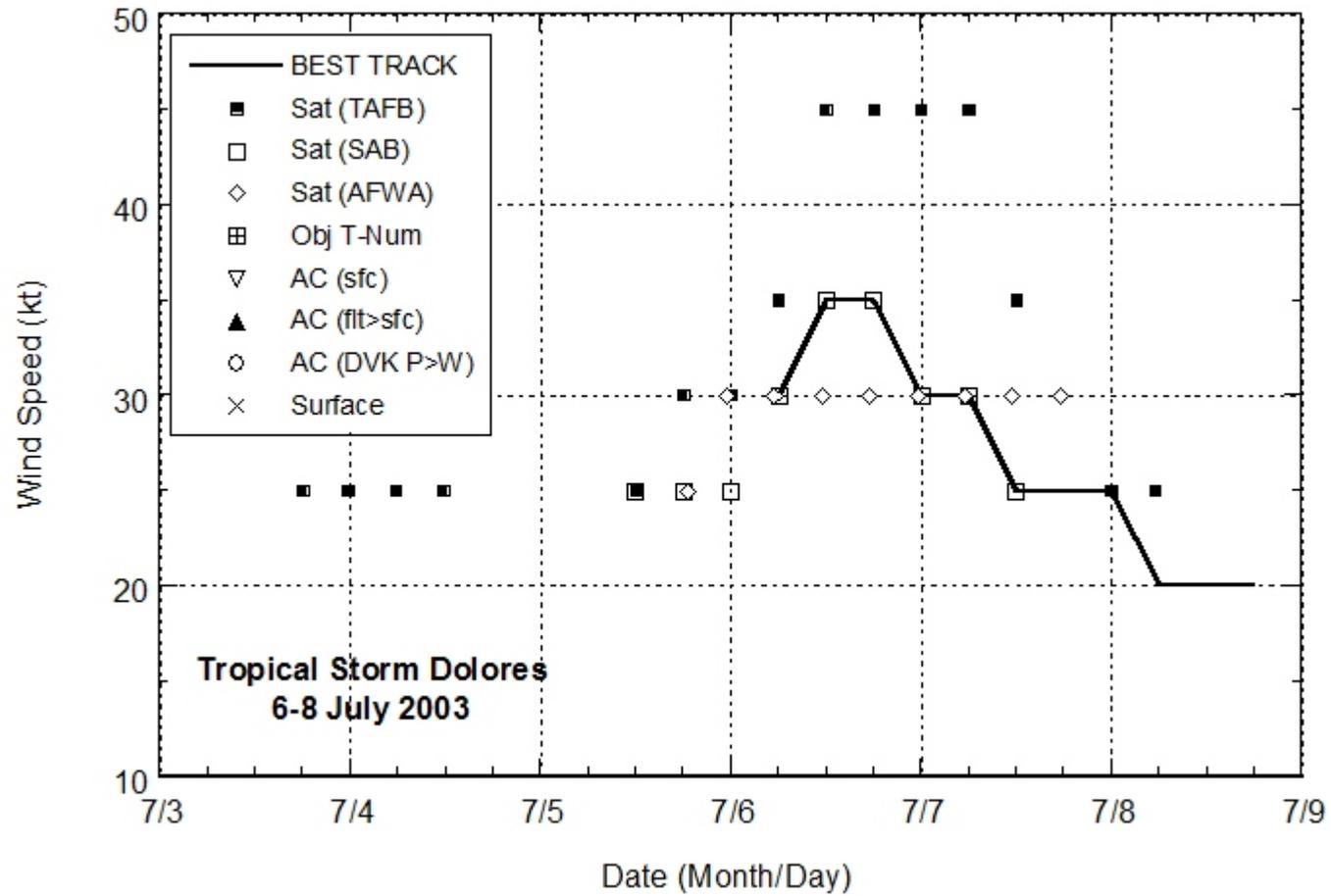


Figure 2. Selected wind observations and best track maximum sustained surface wind speed curve for Tropical Storm Dolores, 6-8 July 2003.

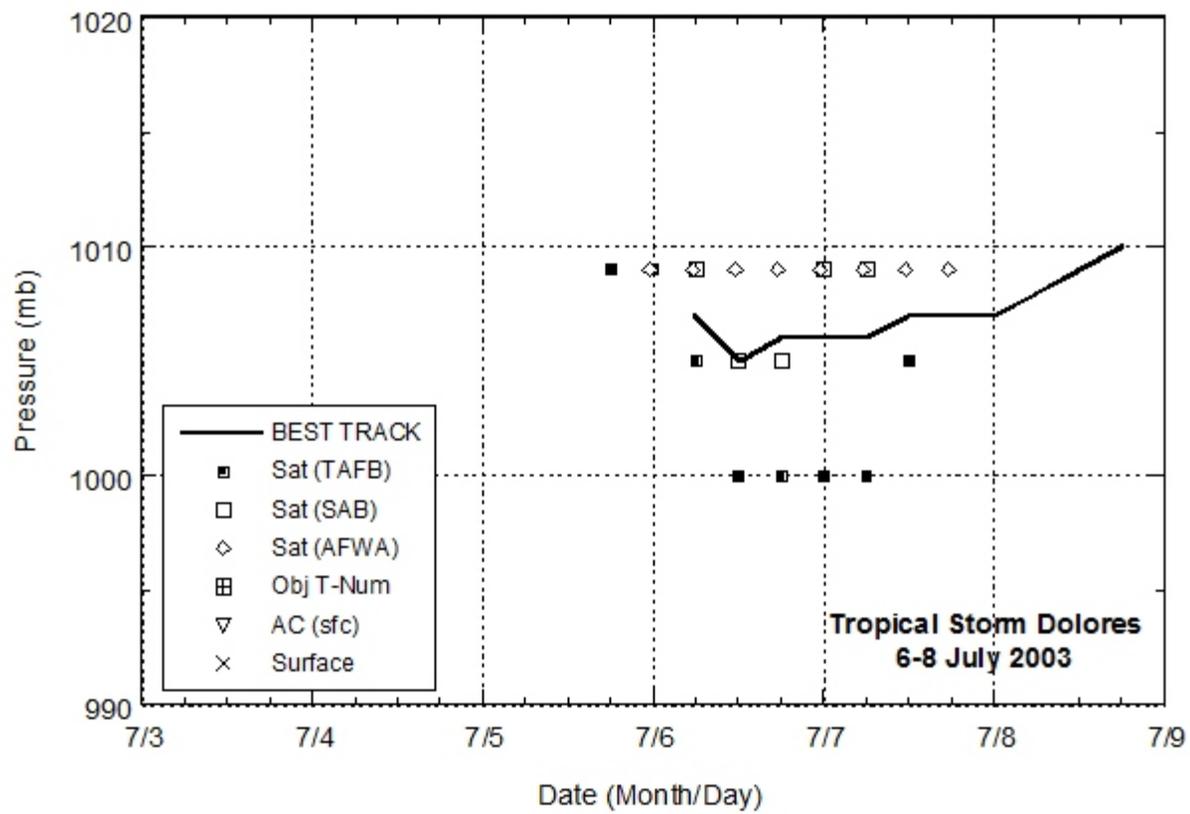


Figure 3. Selected pressure observations and best track minimum central pressure curve for Tropical Storm Dolores, 6-8 July 2003.